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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,311	09/09/2003	Andreas Herkersdorf	CH920020009US1	2148
48233 7590 10/31/2007 SCULLY, SCOTT, MURPHY & PRESSER, P.C. 400 GARDEN CITY PLAZA SUITE 300 GARDEN CITY, NY 11530			EXAMINER CHEA, PHILIP J	
			ART UNIT 2153	PAPER NUMBER
			MAIL DATE 10/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/658,311

Applicant(s)

HERKERSDORF ET AL.

Examiner

Philip J. Chea

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 15-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

This Office Action is in response to an Amendment filed August 16, 2007. Claims 1-12,15-16 are currently pending. Any rejection not set forth below has been overcome by the current Amendment.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2,6,11-12,15-16 rejected under 35 U.S.C. 102(b) as being anticipated by Uga et al. ("A fast and compact longest match prefix look-up method using pointer cache for very long network address"), herein referred to as Uga.

As per claims 1,12,16, Uga discloses processing a data packet, having a destination address, towards a routing destination (see page 595, left-hand column second paragraph below INTRODUCTION, describing a router processing a packet with a network address for a destination); and determining a default-route-prefix in a default-route determination step (see page 597, right-hand column second paragraph, describing a determination step to determine a default-route prefix), when in a routing table cache and in a routing table, there is no entry with a destination address prefix that is a prefix of the destination address (see page 597, right-hand column second paragraph, further showing a lookup in the routing table cache for a matching prefix and a situation when a prefix cannot be found in the routing cache or the routing table).

As per claim 2, Uga further discloses that the default-route-prefix is determined to be said prefix of at least the destination address (see page 597, right-hand column, second paragraph describing an outgoing route (i.e. a destination)).

As per claim 6, Uga further discloses that the default-route-prefix is entered together with a default routing destination as an entry into the routing table cache (see page 597, left-hand column, first

Art Unit: 2153

paragraph, describing how each entry in the cache table has a pointer to an intermediate node in the tree).

As per claims 11,15, Uga discloses processing a data packet, having a destination address, towards a routing destination (see page 595, left-hand column second paragraph below INTRODUCTION, describing a router processing a packet with a network address for a destination), wherein a default-route-prefix resides together with a default routing destination as an entry in a routing table cache (see page 597, right-hand column, second paragraph, describing how a default-route-prefix resides with a default outgoing (i.e. destination) route); and

forwarding the data packet to said default routing destination, when the default-route-prefix matches at least part of said destination address (see page 597, right-hand column, bottom of second paragraph, describing that the default outgoing route is the outgoing route of the longest match prefix).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-5,7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uga as applied above.

As per claim 3, Uga discloses that the first lookup step for the destination address the destination address prefix being said prefix thereof is searched in the routing table cache (see page 597, right-hand column, second paragraph describing a first lookup in the routing table cache for a matching prefix). However, it not expressly disclosed that a second step follows the first step and performs a second lookup step for the destination address the destination address prefix being a prefix thereof is searched in the routing table. However, Uga does show that a situation may occur where a lookup fails to return a matching prefix in both the router table cache and the router table. Therefore, it is obvious, if not implied

Art Unit: 2153

that a second step was taken to lookup the destination prefix in the router table, in order to determine if there is a no match situation.

As per claim 4, Uga that the data packet is forwarded in a destination forwarding step to a corresponding routing destination (see page 595, left-hand column second paragraph below INTRODUCTION, describing a router processing a packet with a network address for a destination). Uga does not expressly disclose that after finding the destination prefix in the routing table, entering the found destination prefix into the routing table cache. However, at the time of the invention, it was old and well known that a cache could be used for storing frequently accessed data items. Therefore, a person having ordinary skill in the art would have found it obvious to update the router table cache with a found destination prefix in order to quickly access the destination later without using an expensive memory lookup in the router table.

As per claim 5, Uga further discloses if the second lookup step results in not finding the destination address prefix being said prefix of the destination address, in a default forwarding step the data packet is forwarded to a default routing destination (see page 597, right-hand column, second paragraph).

As per claim 7, Uga further discloses that in the first lookup step the routing table cache is searched for covering path entries that reside in the routing table cache, the cover path entries in their totality being a prefix for at least all destination address prefixes existing in the routing table (see page 597, right-hand column, second paragraph, describing how an address can be aggregated (i.e. covering path) into an aggregation node).

As per claim 8, Uga further discloses that in an event that the first lookup step results in finding no covering path entry for the destination address, the data packet is forwarded to a default routing destination in a default forwarding step (see page 597, right-hand column, second paragraph, describing how if an aggregated prefix (i.e. covering path) is not found, forwarding the packet to a default address).

As per claim 9, Uga further discloses that in an event that the first lookup step results in finding one of said covering path entry for the destination address, in the second lookup step for said destination address the destination address prefix being said prefix of the destination address is searched in the

Art Unit: 2153

routing table (see page 597, right-hand column, second paragraph, describing how the aggregation node (i.e. covering path entry) might be valid).

As per claim 10, Uga, further discloses that in an event that the first lookup step results in finding the destination address prefix being said prefix of the destination address, the data packet is forwarded in a destination forwarding step to a corresponding routing destination (see page 597, right-hand column, third paragraph).

Response to Arguments

5. Applicant's arguments with respect to claims 1-12, 15-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J. Chea whose telephone number is 571-272-3951. The examiner can normally be reached on M-F 6:30-4:00 (1st Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Application/Control Number: 10/658,311

Page 6

Art Unit: 2153

Philip J Chea
Examiner
Art Unit 2153

PJC 10/12/07



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